

## Message Text

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ACTION OES-07

INFO OCT-01 EUR-12 ISO-00 NRC-05 FEA-01 ACDA-07  
CIAE-00 INR-07 IO-13 L-03 NSAE-00 NSC-05 EB-07  
DODE-00 SS-15 /083 W  
-----081011Z 112109 /20

R 080955Z JUN 77  
FM AMEMBASSY PARIS  
TO ERDA WASHDC  
INFO ERDA GERMANTOWN MD  
SECSTATE WASHDC 3746

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ERDA WASHDC FOR SIEVERING, GIAMBUSSO, HELFRICH,  
VANDERRYN AND PEZDIRTZ

E.O. 11652: N/A  
TAGS: ENRG, TECH, FR, US  
SUBJECT: ENERGY STORAGE R&D

1. FRENCH INTEREST IN DEVELOPING ENERGY STORAGE CAPABILITIES APPEARS TO BE INCREASING. ON JUNE 2 AND 3 AN INTERNATIONAL WORKING MEETING WAS HELD NEAR PARIS AT WHICH R&D AND POTENTIAL OF VARIOUS ENERGY STORAGE TECHNIQUES WERE DISCUSSED AT LENGTH. AT THIS MEETING, M. NOTTI OF ROCKWELL INTERNATIONAL CORPORATION, DOWNEY, CALIFORNIA, GAVE A PRESENTATION ON FLYWHEELS.  
2. PRIOR TO THE ABOVE MEETINGS, ON MAY 27 ADVANTAGE WAS TAKEN OF THE PRESENCE IN PARIS OF G. PEZDIRTZ, DIRECTOR OF ERDA'S DIVISION OF ENERGY STORAGE SYSTEMS, TO ARRANGE A MEETING AT CEA AND DISCUSS THE RESPECTIVE CEA AND ERDA PROGRAMS IN THIS AREA. THE FRENCH HAVE IN PROCESS AT THE LEVEL OF ABOUT 700,000 FRANCS PER YEAR (APPROXIMATELY 5 FRANCS TO 1 DOLLAR) A STUDY INVOLVING THE DESIGN, ENGINEERING AND COSTING OF FLYWHEELS.

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THIS STUDY IS FUNDED IN PART BY THE GOVERNMENT AND IN PART BY A DIVISION OF RENAULT. AN EXPERIMENTAL PROGRAM IN SUPPORT OF THIS WORK, FOCUSED ON MATERIALS (THEY USE GLASS AND DUPONT'S KEVLAR), IS ALSO RECEIVING FUNDING ESTIMATED BY CEA TO BE AT A LEVEL OF OVER 500,000 FRANCS PER YEAR. THE FRENCH BATTERY R&D REPORTEDLY IS LIMITED TO THE SODIUM SULFUR TYPE.

3. WITH RESPECT TO UNDERGROUND STORAGE, AN 800,000 FRANCS STUDY HAS BEEN COMPLETED BY CEA AND ELF AQUITAINE (BRANCH OF A PETROLEUM COMPANY) AND CURRENTLY ABOUT TWO MILLION FRANCS HAVE BEEN PROVIDED FOR EVALUATION OF (A) AQUIFERS, AND (B) ROCK CAVERNS. A NUMBER OF SITES HAVE BEEN STUDIED AND THE FIELD HAS BEEN NARROWED DOWN TO THREE SITES WITH THE EXPECTATION THAT THE EXPERIMENTAL WORK ON A CAPTIVE AQUIFER MAY START BEFORE THE END OF THE YEAR. TEN TO TWELVE MILLION FRANCS PROGRAM HAS BEEN PROPOSED IN THIS AREA BUT HAS NOT YET RECEIVED FULL APPROVAL. CEA IS ALSO DISCUSSING WITH EDF EXPANDING THE EFFORT ON UTILIZATION OF ROCK CAVERNS.

4. CEA HAS EXPRESSED AN INTEREST IN A COOPERATIVE EFFORT WITH THE US IN THIS AREA AND DR. PEZDIRTZ INDICATED THAT THERE MIGHT BE SOME US INTEREST IN COOPERATION AND A JOINT VENTURE.  
GAMMON

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NNN

## Message Attributes

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**Review Markings:**  
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